



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/715,768

11/18/2003

Robert Gentile

GER-GB03

5280

20738 7590 10/24/2007
THOMAS P O'CONNELL
1026A MASSACHUSETTS AVENUE
ARLINGTON, MA 02476

EXAMINER

TORIMIRO, ADETOKUNBO OLUSEGUN

ART UNIT

PAPER NUMBER

3714

MAIL DATE

DELIVERY MODE

10/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/715,768

Applicant(s)

GENTILE, ROBERT

Examiner

Adetokunbo O. Torimiro

Art Unit

3714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 and 37-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 and 37-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The amendment received on 10/04/2007 has been considered. It has been noted that claims 1-4,8,9,15,18,19,32,33,37,47,49, and 56-59 have been amended. Claim 36 has been cancelled.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9,26-35,37,41-44,47,49,50,53-56, and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schrimmer et al (US 6,042,487) in view of Dykstra et al (US 5,066,011).

Re claims 1 and 47: Schrimmer et al teaches a high impact ball (10) and method comprising: at least one surface deviation / *dimples* (44) disposed relative to the outer surface of the spherical member of the core structure (34); at least one corresponding surface deviation disposed relative to the inner surface of the spherical casing (40) in a mating relationship with the at least one surface deviation (44) disposed relative to the spherical member of the core structure whereby the at least one surface deviation and the at least one corresponding surface deviation are interposed between the spherical member of the core structure and the spherical casing (see fig.1 and fig.2; col.5, lines 25-35).

However, Schrimmer et al does not explicitly teach a core structure comprising a

Art Unit: 3714

spherical member with an outer surface; a spherical casing concentrically disposed relative to the spherical member of the core structure wherein the spherical casing has an inner surface and an outer surface.

Dykstra et al teaches a high impact game ball (10) comprising: a core structure (12) comprising a spherical member with an outer surface (**see fig.2; col.2, lines 5-11**); a spherical casing concentrically disposed relative to the spherical member of the core structure wherein the spherical casing has an inner surface and an outer surface (**see fig.2; col.2, lines 12-13**).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made this combination of the teachings of Dykstra et al and Schrimmer et al to include dimples in the high impact ball so as to provide a ball with a specific aerodynamic to the ball and also to invent a ball that looks and feels very similar to the common and already known types of balls; and also to have spherical members in the ball so as to have a well symmetric invention.

Re claims 2-4 and 49: Schrimmer et al teaches the high impact game ball wherein the at least one surface deviation disposed relative to the spherical member of the core structure comprises a rigid registration projection and wherein the at least one surface deviation disposed relative to the spherical casing comprises a registration indentation (34) that corresponds to the registration projection (22,34); wherein the registration projection comprises a rigid post that projects from the spherical member of the core structure and into the registration indentation of the spherical casing; wherein there are a plurality of rigid registration projections (22,34) that project from the spherical member of the core

Art Unit: 3714

structure and into corresponding registration indentations of the spherical casing (see fig.2; col.4, lines 19-25; col.5, lines 25-29; and col.6, lines 54-56). It is apparent to Examiner that the connector and the inner core portion of Schrimmer's invention serve the same function as the registration projection and registration indentation respectively. It is obvious that these parts of the ball keep the circuitry in place and allows them to move in order to make the ball perform the intended function.

Re claim 5: Schrimmer et al teaches wherein each of the plurality of registration projections comprises a metal post (see fig.2; col.4, lines 12-15; col.6, lines 45-48). It is apparent that for a ball construction like this, the connector has to be made of a metal post so as to withstand the hit the ball will receive while being capable of conducting the required electrical energy needed for the lighting of the ball.

Re claim 6 and 50: Schrimmer et al teaches the high impact ball (10) further comprising a switching arrangement embedded in the spherical member of the core structure wherein the switching arrangement comprises a means for sensing an activation condition relative to the switching arrangement, a means for triggering a response upon an occurrence of the activation condition, and a means for exhibiting the response based on the occurrence of the activation condition (see col.5, lines 36-49).

Re claims 7-9 and 42-44: Schrimmer et al teaches a high impact ball (10); wherein the light source is activated for pre-determined time period after the impact (see abstract,

lines 15 and 16).

However, Schrimmer et al fails to teach the high impact ball wherein the means for sensing an activation condition comprises a means for sensing an impact relative to the high impact game ball; wherein the means for exhibiting a response based on the occurrence of the activation condition comprises a light source for being activated in response to an impact relative to high impact game ball; wherein the means for exhibiting a response based on the occurrence of the activation condition comprises a sound source for being activated in response to an impact relative to the high impact game ball.

Dykstra et al teaches the high impact ball wherein the means for sensing an activation condition comprises a means for sensing an impact relative to the high impact game ball; wherein the means for exhibiting a response based on the occurrence of the activation condition comprises a light source for being activated in response to an impact relative to high impact game ball; wherein the means for exhibiting a response based on the occurrence of the activation condition comprises a sound source for being activated in response to an impact relative to the high impact game ball (see col.2, lines 37-46).

Therefore it would have been obvious to one of ordinary in the art at the time the invention was made to include a way to activate the response of a light source or sound source so as to produce an output of light or sound when the activation condition is satisfied.

Re claims 26-28,41, and 62: Schrimmer et al teaches the high impact game ball further comprising a luminescent layer for enabling the high impact game ball to emit light;

Art Unit: 3714

wherein the luminescent layer comprises a sub-layer; wherein the luminescent layer comprises an outer layer (see fig.1; col.3, lines 59-65).

Re claims 29-32: Schrimmer et al teaches the high impact game ball further comprising an access conduit with a proximal end adjacent to the switching arrangement and a distal end in communication with an exterior surface of the high impact game ball; wherein the means for sensing an activation condition relative to the switching arrangement comprises a switch disposed adjacent to the proximal end of the access conduit; further comprising an elongated probe adapted to be received into the access conduit for triggering the switch of the switching arrangement whereby the elongate probe can be employed to induce an activation condition; further comprising an elongate probe adapted to be received into the access conduit and a means for passing power through the elongate probe whereby the elongate probe can be employed to provide power to the switching arrangement from exterior to the high impact game ball (see figs.1-3; col.5, lines 14-49).

Re claims 33-35,37 and 53-56: Schrimmer et al teaches a game ball (10) comprising a spherical member; a switching arrangement embedded in the spherical member wherein the switching arrangement comprises a means for sensing an activation condition relative to the switching arrangement, a means for triggering a response upon an occurrence of the activation condition, and a means for exhibiting the response based on the occurrence of the activation condition; an elongate probe adapted to be received into the access conduit; a means for passing power through the elongate probe whereby the elongate probe can be

Art Unit: 3714

employed to provide power to the switching arrangement from exterior to the high impact game ball (**figs.1-3**); and an access conduit with a proximal end adjacent to the switching arrangement and a distal end in communication with an exterior surface of the game; wherein the means for sensing an activation condition relative to the switching arrangement comprises a switch disposed adjacent to the proximal end of the access conduit; further comprising an elongate probe adapted to be received into the access conduit for triggering the switch of the switching arrangement whereby the elongate probe can be employed to induce an activation condition; further comprising an elongate probe adapted to be received into the access conduit and a means for passing power through the elongate probe whereby the elongate probe can be employed to provide power to the switching arrangement; wherein the switching arrangement further comprises a rechargeable means for retaining power whereby the elongate probe and the means for passing power through the elongate probe can be employed to recharge the means for retaining power (**see figs.1-3; col.5, lines 14-49**).

4. Claims 10-14,44-46,51, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schrimmer et al (US 6,042,487) in view of Dykstra et al (US 5,066,011) and further in view of Gick (US 2005/0005873) and Tinsman (US 2002/0173378). The teachings of Dykstra et al and Schrimmer et al have been discussed above.

Re claims 10-14,44-46,51, and 52: Schrimmer et al teaches a high impact game ball (10) with means for sensing activation.

However, Schrimmer et al fails to teach wherein the means for activation condition

comprises a means for sensing remote activation signal whereby the response can be caused to be exhibited by remote activation signal; wherein the means for sensing an activation condition comprises a means for sensing an infrared activation signal; wherein the means for sensing an activation condition comprises a means for sensing a sound signal; wherein the means for exhibiting a response based on the occurrence of the activation conditions comprises a light source for being activated in response to a remote activation signal; wherein the means for exhibiting a response based on the occurrence of the activation condition comprises a sound source for being activated in response to a remote activation signal.

Gick teaches wherein the means for sensing an activation condition comprises a means for sensing a sound signal / *sound from vibration*; wherein the means for exhibiting a response based on the occurrence of the activation conditions comprises a light source for being activated in response to a activation signal; (see par. [0019]).

Tinsman teaches wherein the means for activation condition comprises a means for sensing remote activation signal whereby the response can be caused to be exhibited by remote activation signal; wherein the means for sensing an activation condition comprises a means for sensing an infrared activation signal; wherein the means for exhibiting a response based on the occurrence of the activation condition comprises a sound source for being activated in response to a remote activation signal (see pars. [0005], [0007], and [0008]).

Therefore it would have been obvious to one of ordinary in the art at the time the invention was made to make this combination of prior arts so as to include a way to activate the response of a light source or sound source so as to produce an output of light or sound when the activation condition is satisfied.

5. Claims 15-21,48, and 57-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schrimmer et al (US 6,042,487) in view of Dykstra et al (US 5,066,011) and further in view of Faulkner (US 3,426,121) and Tinsman (US 2002/0173378). The teachings of Dykstra et al and Schrimmer et al have been discussed above.

Re claim 15-21,48, and 57-59: Schrimmer et al teaches a high impact ball (10) comprising: at least one surface deviation / *dimples* (44) disposed relative to the spherical member of the core structure (34); at least one corresponding surface deviation disposed relative to the spherical casing (40) in a mating relationship with the at least one surface deviation (44) disposed relative to the spherical member of the core structure; wherein the spherical shell has an inner surface and an outer surface (see fig.1 and fig.2; col.5, lines 25-35).

However, Schrimmer et al fails to teach further comprising a plurality of positioning stays that each project from the spherical member of the core structure an amount substantially equal to a radial thickness of the spherical casing whereby the plurality of positioning stays can ensure a concentric relationship between the spherical member of the core structure and the spherical casing; wherein each of the plurality of positioning stays comprises a generally rigid strand of material that projects radially from the spherical member of the core structure; wherein the spherical casing is formed by injection molding; further comprising a spherical shell disposed to envelope the spherical casing and the core structure; wherein spherical shell has a generally smooth exterior surface.

Faulkner teaches wherein the spherical casing is formed by injection molding and

Art Unit: 3714

includes cooling the spherical casing by an active cooling method; further comprising a spherical shell disposed to envelope the spherical casing and the core structure (see fig.4; col.2, lines 45-61); wherein spherical shell has a generally smooth exterior surface (see fig.4).

Tinsman teaches further comprising a plurality of positioning stays (40) wherein each positioning stay has a proximal end coupled to the spherical member of the core structure, a body portion, and a distal end and wherein each positioning stay projects from the spherical member of the core structure an amount substantially equal to a radial thickness of the spherical casing whereby the plurality of positioning stays can ensure a concentric relationship between the spherical member of the core structure and the spherical casing; wherein each of the plurality of positioning stays comprises a generally rigid strand of material that projects radially from the spherical member of the core structure (see figs.2 and 3).

Therefore it would have been obvious to one of ordinary skill in the art at the time the inventions was made to include positioning stays so has to provide a support and a way to hold the inner core in place, and to used injection molding in this invention so has to fill the ball with the necessary material without affecting the set up of the inner core.

6. Claims 22-25,38-40,60, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schrimmer et al (US 6,042,487) in view of Dykstra et al (US 5,066,011) and further in view of Cavallaro et al (US 3,426,121) and Kumasaka et al (US 4,463,951). The teachings of Dykstra et al and Schrimmer et al have been discussed above.

Re claim 22-25,60, and 61: Schrimmer et al teaches a high impact ball (10) with

Art Unit: 3714

core.

However, Schrimmer et al fails to teach wherein the spherical member of the core structure is formed from a polycarbonate resin under a high pressure injection molding process, wherein the spherical casing is formed from a high density silicone under an injection molding process, and wherein the spherical shell is formed under an injection molding process; further comprising a lightweight spherical layer with a specific gravity of less than 1; wherein the high impact game ball has a specific gravity of not greater than 1; wherein the lightweight spherical layer comprises an aerogel.

Cavallaro et al teaches wherein the spherical member of the core structure is formed from a polycarbonate resin under a high pressure injection molding process, wherein the spherical casing is formed from a high density silicone under an injection molding process, and wherein the spherical shell is formed under an injection molding process (see col.1, lines 11; col.3, lines 1-12).

Kumasaka et al teaches further comprising a lightweight spherical layer with a specific gravity of less than 1; wherein the high impact game ball has a specific gravity of not greater than 1; wherein the lightweight spherical layer comprises an aerogel/ *foam* (see fig.1; col.2, lines 11-17).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to various materials which could include but not limited to polycarbonate resin, silicon, materials with specific gravity of less than 1, and aerogel, so has to give the invention the look and feel and functionality it is intended to have and also to provide a ball that will be enjoyable by the gamer using it.

Re claims 38-40: Schrimmer et al teaches a high impact ball (10) with core.

However, Schrimmer et al fails the game ball further comprising a lightweight spherical layer with a specific gravity of less than 1; wherein the high impact game ball has a specific gravity of not greater than 1; wherein the lightweight spherical layer comprises an aerogel.

Kumasaka et al teaches further comprising a lightweight spherical layer with a specific gravity of less than 1; wherein the high impact game ball has a specific gravity of not greater than 1; wherein the lightweight spherical layer comprises an aerogel/ *foam* (see fig.1; col.2, lines 11-17).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to various materials which could include but not limited to polycarbonate resin, silicon, materials with specific gravity of less than 1, and aerogel, so has to give the invention the look and feel and functionality it is intended to have and also to provide a ball that will be enjoyable by the gamer using it.

Response to Arguments

7. Applicant's arguments filed 03/16/2007 have been fully considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument regarding claims 1 and 47 that Schrimmer teaches a disc and not a spherical member, the examines points out that Schrimmer discloses an

Art Unit: 3714

illuminated golf ball, and golf balls are well known to be spherical and not a disc as argued by the applicant. Response to claims 2-5 has been explained in the office action.

In response to the applicant's argument regarding claims 25 and 40 that Kumasaka does not teach an aerogel, examiner points out that although the term aerogel is not specifically mentioned, Kumasaka teaches about foam being used in the production of the ball. And according to description and definition of an aerogel, it is a type of foam that is clear, solid, and lightweight.

In response to applicant's argument regarding claims 26-28 that Schrimmer do not disclose a luminescent layer, examiner agrees with applicant's definition of luminescent, but also points out to applicant that according to another meaning of luminous, luminescent layer, it is a transparent, translucent layer that could allow pass through it. It is a surface that emits light not caused by heat. The light emission according to Schrimmer is not caused by heat but simply by mechanical and electrical energy.

In response to the applicant's argument that Faulkner does not teach active coolness, the examiner points out to the applicant that it is a standard in the process of injection molding for there to be cooling in order for the product to solidify, it is therefore obvious to use any type of cooling method for this purpose.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).


Art Unit: 3714

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adetokunbo O. Torimiro whose telephone number is (571) 270-1345. The examiner can normally be reached on Mon-Fri (8am - 4pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571) 272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

AT


ROBERT E. PEZZUTO
SUPERVISORY PRIMARY EXAMINER